

REMARKS

Claims 1-5 and 7-9 are all the claims pending in the application.

In paragraph 6 at page 3 of the Office Action, claims 1-2, 4 and 7-9 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,974,845 (“Minamino”) in view of SU 516126 A (“Lidorenko”).

In paragraph 7 at page 4 of the Office Action, claims 1-2, 4 and 6-9 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,430,103 (“Ohata”), U.S. Patent No. 5,444,116 (“Amin ‘116”) or U.S. Patent No. 5,461,107 (“Amin ‘107”), each individually in view of Minamino and Lidorenko.

Applicants traverse the rejections and respectfully request the Examiner to reconsider in view of the following remarks.

The crosslinkable elastomer composition for plasma process of the present claimed invention is patentable over the cited references, *at least* because the references fail to disclose or suggest employing a carbon fluoride filler that is heat treated at 300 to 550 °C in advance.

When carbon fluoride filler is heat treated in advance, an impure gas in the carbon fluoride filler is removed. By heat treating the carbon fluoride filler and removing the impure gas, a crosslinkable elastomer composition containing the heat-treated carbon fluoride filler can be endowed with a resistance to plasma treatment.

According to the English Abstract of Lidorenko, Lidorenko is directed to an electric battery containing a lithium anode, carbon fluoride cathode and non aqueous electrolytic solution. Specifically, Lidorenko discloses an electrode made by mixing powdered carbon fluoride with a *polymeric binder* and an electrically conductive additive, such as an acetylenic

carbon black, pressing the mixture onto a lattice, then heating to the *softening point of the polymer*.

In support of the rejection, the Examiner takes the position that the “softening point” of at least some polymeric binders may overlap in scope with the claimed heat treatment temperature of 300 to 550 °C, and further suggests that heating before or after mixing of the polymer and carbon fluoride filler may not be critical for final product performance (first full paragraph at page 5 of the Office Action).

However, heating to the softening point of the polymer *in situ* is not compatible with preparing a “crosslinkable” elastomer composition in the first instance (for the reason that heating at 300-550 °C would tend to cure the elastomer so that it is no longer crosslinkable). In that case, combination of Minamino and Lidorenko would destroy or at least impair the intended function of Minamino (which is to provide a polymer composition which is crosslinkable with UV rays).

More specifically, in the case that the heating up to 300°C is carried out after mixing the carbon fluoride filler with the polymer binder, the crosslinkable elastomer composition of the present invention *cannot be obtained* because the crosslinkable elastomer has already been crosslinked during the heat treatment.

Furthermore, a person having ordinary skill in the art would understand that the heat treatment described in Lidorenko is *directed to heat treating the polymer binder* and that the heat treatment of the carbon fluoride filler is only circumstantial, since Lidorenko discloses that the mixture is heat treated up to the softening point of the polymer binder after mixing the polymer binder and the carbon fluoride filler.

Accordingly, Applicants submit that Lidorenko does not disclose or suggest heat treating carbon fluoride filler in advance.

Even if the polymer disclosed in Lidorenko has a high softening point, and even if the temperature of heat treatment recited by the present claims were to overlap the softening point of the polymer binder of Lidorenko as the Examiner believes, and even if Lidorenko's filler was heat treated in advance, Lidorenko *teaches and requires* that the filler be heat treated *again* in the mixture with the polymer binder. This result is not reasonable and does not suggest the presently recited crosslinkable elastomer composition for plasma process.

Moreover, if the carbon fluoride filler is heat treated in the sequence described in Lidorenko, the obtained crosslinkable elastomer composition would not have resistance to plasma treatment since the impure gas in the carbon fluoride filler, required for plasma resistance, would not be removed.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the §103 rejection of claims 1-2, 4 and 6-9 based on Minamino and Lidorenko.

In paragraph 8 at page 4 of the Office Action, claims 3 and 5 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ohata, Amin '116 or Amin '107, each individually in view of Minamino and Lidorenko, and further in view of U.S. Patent No. 6,610,761 ("Matsumoto").

Applicants traverse.

Claims 3 and 5 depend indirectly from independent claim 1 and are patentable *at least* by virtue of their dependency and the additional elements recited therein.

Reconsideration and withdrawal of the §103 rejection of claims 3 and 5 are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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